

Abstract of the Disclosure

MULTIPLE PARALLEL PIPELINE PROCESSOR HAVING SELF-REPAIRING CAPABILITY

A multiple parallel pipeline digital processing apparatus has the capability to substitute a second pipeline for a first in the event that a failure is detected in the first pipeline. Preferably, a redundant pipeline is shared by multiple primary pipelines. Preferably, the pipelines are located physically adjacent one another in an array. A pipeline failure causes data to be shifted one position within the array of pipelines, to by-pass the failing pipeline, so that each pipeline has only two sources of data, a primary and an alternate. Preferably, selection logic controlling the selection between a primary and alternate source of pipeline data is integrated with other pipeline operand selection logic.